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CLAIMS:

1. Sensor device comprising a detecting means for detecting components present in fluid samples and providing an output representative of the content of said component and a permeable membrane interposed between the detecting means and a sample to be examined, characterised in that the said membrane is made of a composition containing an impermeable polymer and a poly-vinylpyridine ("PVP").
2. Sensor device as claimed in Claim 1 wherein the impermeable polymer is a polyvinyl chloride ("PVC")
3. Sensor device as claimed in Claim 1 or Claim 2 wherein the impermeable polymer and the PVP are mixed intimately.
4. Sensor device as claimed in any of Claims 1 to 3 wherein the poly-vinylpyridine is derived from a compound containing a pyridine nucleus and a vinyl substituent, most conveniently 4-vinylpyridine.
5. Sensor device as claimed in any of Claims 1 to 4 wherein the proportion of the poly-vinylpyridine is in the range 20 to 80%, and preferably about 50% (calculated on the total composition) by weight.
6. Sensor device as claimed in any of Claims 1 to 5 wherein the thickness of the membrane is in the range 1 to 50 μm .
7. Sensor device as claimed in any of Claims 1 to 6 wherein the detecting means is of an electrochemical nature, preferably an electrolytic detection device, particularly an electrode.
8. Sensor device as claimed in any of Claims 1 to 7 wherein the electrolytic detecting device operates in a liquid or gel phase electrolyte-containing medium, preferably aqueous or aqueous-based.

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9. Sensor device as claimed in Claim 7 or Claim 8 wherein the electrode is a metal electrode, especially a platinum electrode.
- 5 10. Sensor device as claimed in any of Claims 7 to 9 wherein the electrode is in combination with a reference or counter electrode, especially a silver/silver chloride counter-electrode, as for example in the so-called Clark electrode, which comprises a platinum electrode surrounded by a silver/silver chloride ring.
- 10 11. Sensor device as claimed in any of Claims 1 to 10 wherein the sample under examination reaches the electrode by diffusion
12. Sensor device as claimed in any of Claims 1 to 11 wherein an enzyme is present to convert one analyte into
- 15 another, for ease of detection.
13. Sensor device as claimed in any of Claims 1 to 12 wherein additional materials, especially membranes made of other materials (for example as multi-layer membrane product) is used in conjunction with a membrane composed
- 20 of an impermeable polymer (e.g. polyvinyl chloride) and a poly-vinylpyridine.
14. Sensor device as claimed in Claim 13 wherein the membrane containing poly-vinylpyridine is the outermost layer so that it contacts the sample under examination.
- 25 15. Sensor device having a membrane containing a poly-vinylpyridine (PVP), substantially as described.
16. Method for determining a component in a fluid sample, which comprises contacting the sample with a sensor device as claimed in any of Claims 1 to 15.
- 30 17. Method as claimed in Claim 16 wherein the determination is made by an electrolytic analysis procedure.

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18. Method as claimed in Claim 16 or Claim 17 wherein the component to be determined is a low molecular weight, non-volatile compound, for example a sugar or a neutral phenol.

19. Method as claimed in any of Claims 16 to 18 applied to the monitoring, measurement and assessment of one or more analytes, especially in biological media, for example blood and other biological (e.g. bodily) fluids.

20. Method as claimed in Claim 19 wherein the analyte is glucose.

21. Method as claimed in any of Claims 16 to 20 wherein the mode of electrolytic analysis used is amperometric analysis or pulsed amperometric determination (commonly known as "PAD").

22. Method for determining a component in a fluid sample, using a sensor device having a membrane containing a polyvinylpyridine ("PVP"), substantially as described.

23. Polymer compositions characterised in that they are composed of an impermeable polymer together with a polyvinylpyridine ("PVP").

24. Polymer compositions as claimed in Claim 23 wherein the impermeable polymer is a polyvinyl chloride ("PVC") so the composition comprises a polyvinyl chloride ("PVC") and a poly-vinylpyridine ("PVP").

25. Polymer compositions as claimed in Claim 23 or Claim 24 wherein the impermeable polymer and poly-vinylpyridine are mixed intimately.

26. Polymer compositions as claimed in any of Claims 23 to 25 which are in the form of a membrane.

27. Polymer compositions containing poly-vinylpyridine, substantially as described.

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28. Use of a sensor device as claimed in any of Claims 1 to 15 for the purpose of determining or monitoring an analyte.

5 29. Use of a sensor device as claimed in Claim 28 wherein the analyte is glucose.

30. Use of a polymer composition as claimed in any of Claims 23 to 27 for the manufacture of a sensor device, especially a sensor device for use in a biological environment or with biological media.

10 31. Use of a polymer composition as claimed in any of Claims 23 to 27 as an anti-fouling surface material, for example as a coating which may be attached to the surface of a polymer article or product, preferably by deposition from a solution of our composition in a solvent and then
15 removing the solvent by evaporation.

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